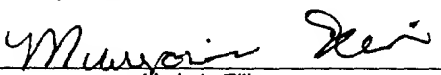
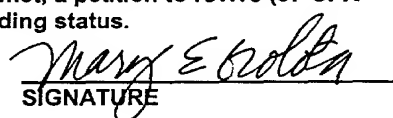


FORM PTO-1390 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		
<b>TRANSMITTAL LETTER TO THE UNITED STATES</b>		
<b>DESIGNATED/ELECTED OFFICE (DO/EO/US)</b>		
<b>CONCERNING A FILING UNDER 35 U.S.C. 371</b>		
ATTORNEY DOCKET NUMBER <b>IN-5443</b>	U.S. APPLICATION NO. (F.K.W. SEE 37 RR 15) <b>09/743049</b>	
INTERNATIONAL APPLICATION NO. <b>PCT/EP 99/04497</b>	INTERNATIONAL FILING DATE <b>09/07/1998</b>	PRIORITY DATE CLAIMED <b>30/06/1999</b>
TITLE OF INVENTION: <b>METHOD FOR DETERMINING DIRECTION-DEPENDENT PROPERTIES OF ENAMELS</b>		
APPLICATION(S) FOR DO/EO/US: <b>Wolfgang DUSCHEK and Bernd BIALLAS</b>		
<p>Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:</p> <p>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.</p> <p>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</p> <p>3. <input type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371 (b) and PCT Articles 22 and 39(1).</p> <p>4. <input type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).</p> <p style="margin-left: 20px;">b. <input checked="" type="checkbox"/> have been transmitted by the International Bureau.</p> <p style="margin-left: 20px;">c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US)</p> <p><input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(C)(2)).</p> <p><input checked="" type="checkbox"/> Amendment to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau).</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> have been transmitted by the International Bureau.</p> <p style="margin-left: 20px;">c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</p> <p style="margin-left: 20px;">d. <input checked="" type="checkbox"/> have not been made and will not be made</p> <p>8. <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</p> <p>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</p> <p>10. <input type="checkbox"/> A translation of the annex to the International Preliminary Examination Report under PCT Article 36</p> <p>Items 11. to 16. below concern other document(s) or information included:</p> <p>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included</p> <p>13. <input checked="" type="checkbox"/> A FIRST preliminary amendment. A SECOND or SUBSEQUENT preliminary amendment.</p> <p>14. <input type="checkbox"/> A substitute specification.</p> <p>15. <input type="checkbox"/> A Change of power of attorney and/or address letter.</p> <p>16. <input checked="" type="checkbox"/> Other items or information:</p> <p><b>A copy of the cover sheet from the PCT Published Application</b></p>		
<p>I hereby certify that the attached correspondence is being deposited with the United States Postal Service in an envelope as "Express Mail Post Office to Addressee" Mailing Label No. <b>EK560159257US</b> addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on January 4, 2001.</p> <p style="text-align: center;"> Marjorie Ellis</p>		

U.S. APPLICATION NO. (If known see 37 C.F.R. 1.50)		INTERNATIONAL APPLICATION NO.		ATTORNEY'S DOCKET NUMBER	
09/743049		PCT/EP 99/04497		IN-5443	
17. <input checked="" type="checkbox"/> The following fees are submitted				CALCULATIONS PTO USE ONLY	
<b>Basic National Fee (37 CFR 1.492(a)(1)-(5)):</b> Neither international preliminary examination fee (37 CFR 1.482) Nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO.....				\$970.00	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO.....				\$840.00	
International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.44(a)(2)) paid to USPTO.....				\$760.00	
International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4).....				\$670.00	
International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) .....				\$ 96.00	
<b>ENTER APPROPRIATE BASIC FEE AMOUNT =</b>				\$840.00	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input checked="" type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$130.00	
Claims	Number Filed	Number Extra	Rate		
Total Claims	10- 20 =		X \$22.00	\$	
Independent claims	01- 03 =		X \$80.00	\$	
Multiple dependent claims(s) (if applicable)			+ \$260.00	\$	
<b>TOTAL OF ABOVE CALCULATION =</b>				\$970.00	
Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 CFR 1.9, 1.27, 1.28).				\$	
<b>SUBTOTAL =</b>				\$970.00	
Processing fee of \$130.00 for furnishing the English translation later the months from the earliest claimed priority date (37 CFR 1.492(f)).				\$	
<b>TOTAL NATIONAL FEE =</b>				\$970.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +				\$	
<b>TOTAL FEES ENCLOSED =</b>				\$970.00	
				Amount to be:	\$
				refunded	
				Charged	\$970.00
a. <input type="checkbox"/> A check in the amount of \$_____ to cover the above fees is enclosed.					
b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. 23-3425 in the amount of \$970.00 to cover the above fees A triplicate copy of this sheet is enclosed.					
c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 23-3425. A triplicate copy of this sheet is enclosed.					
<b>NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</b>					
<b>SEND ALL CORRESPONDENCE TO:</b>					
<b>BASF CORPORATION</b> Patent Department 26701 Telegraph Road Southfield, Michigan 48034-2442 (248) 948-2020 Form PTO-1390(REV 5-93)				<b>SIGNATURE</b>  <b>Mary E. Golota</b> Name  <b>36,814</b> REGISTRATION NUMBER	

PATENT

(Practitioner's Docket No. IN- 5443)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Wolfgang DUSCHEK and Bernd  
BIALLAS

US Serial No. Herewith

Filed: January 4, 2001

For: METHOD FOR DETERMINING  
DIRECTION-DEPENDENT  
PROPERTIES OF ENAMELS

Group Art Unit: Not Assigned

Examiner: Not Assigned

I hereby certify that the attached correspondence is being deposited with the United States Postal Service in an envelope as "Express Mail Post Office to Addressee" Mailing Label No. **E560159257US** addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on January 4, 2001.

  
Marjorie Ellis

PRELIMINARY AMENDMENT UNDER 37 CFR § 1.115

Hon. Commissioner of Patents and Trademarks  
Washington, D.C.

Sir:

This preliminary amendment is submitted with the application for entry into the U.S. National Phase under Chapter II. This application is based on PCT/EP99/04497 filed on June 30, 1999.

In connection with the filing of this National Phase application, please make the following preliminary amendments.

IN THE SPECIFICATION:

Please delete the titles "METHOD OF DETERMINING DIRECTION-DEPENDENT PROPERTIES OF COATINGS" and substitute therefor -- METHOD FOR DETERMINING DIRECTION-DEPENDENT PROPERTIES OF ENAMELS--.

IN THE CLAIMS:

1.(Amended) A method of determining direction-dependent properties of coatings, in which measurements of coating properties are made along a test track on a sample coating using one or more measuring instruments, wherein

- a) at least one measurement is recorded in relation to direction, and
- b) the sample coating has at least one coat thickness which occurs twice and [with]at least two different coat- thickness gradients along the test track.

2. (Amended) The method [as claimed in]of claim 1, wherein the [corresponding]at least two coat-thickness gradients are different in sign.

3. (Amended) The method [as claimed in one] of claim[s] 1[ and 2], wherein the at least one coat thickness has a minimum or a maximum along the test track.

4.(Amended) The method [as claimed in one] of claim[s] 1[ to 3], wherein the coat thickness changes symmetrically along the test track[, preferably being bell-shaped or parabolic].

5.(Amended) The method [as claimed in one] of claim[s] 1[ to 4], wherein the sample coating is produced by spraying along a straight line.

6. (Amended) The method [as claimed in one] of claim[s] 1[ to 5], wherein the test track extends without reversals[, preferably linearly].

7.(Amended)The method [as claimed in one] of claim[s] 1[ to 6], which is used to measure coat thickness, evenness, shade, haze, and/or gloss of the sample coating.

8. (New) The method of claim 4, wherein the coat thickness changes symmetrically along the test track in a bell-shape.

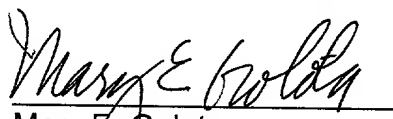
9. (New) The method of claim 4, wherein the coat thickness changes symmetrically along the test track in a parabolic shape.

10. (New) The method of claim 6, wherein the test track extends linearly.

#### **REMARKS**

Upon entry of the present amendment claims 1-10 will be pending in the application. Claims 1-7 have been amended in accordance with the requirements of U.S. patent practice. New claims 8-10 adds no new matter, as these claims contain subject matter deleted from claims 1-7. Applicants respectfully request entry of the preliminary amendment.

Respectfully Submitted,

  
Mary E. Golota  
Registration No. 36,814

Date: Thursday, January 04, 2001  
BASF Corporation  
26701 Telegraph Road  
Southfield, Michigan 48034-2442  
(248)-948-2020

1/PRTS

09/743049  
528 Rec'd PCT/PTO 04 JAN 2001

PAT 98893 PCT  
BASF Coatings AG

June 16, 1999

**Method of determining direction-dependent properties of  
coatings**

5           The present invention relates to a method of  
determining direction-dependent properties of coatings,  
in which measurements of coating properties are made  
along a test track on a sample coating using one or  
more measuring instruments.

10           For the development and quality control of  
paints and other coating materials it is necessary to  
investigate the resulting coatings in respect of a  
variety of properties. To this end, sample coatings are  
produced for which the designation "test panels" has  
15 become established, on account of the fact that the  
sample-coated article is generally platelike.

          The properties investigated with the aid of  
test panels relate to a broad spectrum of relevant  
properties of the coating. They include on the one hand  
20 the optical properties, especially the color properties  
of the coating (shade, gloss, evenness, effect  
properties, haze, hiding power). On the other hand, the  
mechanical properties are of interest, such as the  
hardness of the coating, its adhesion to the substrate,  
25 and elasticity. Finally of interest are further  
physical properties, such as the diffusion capacity of

foreign substances in the coat, the electrical conductivity of the coat, the UV absorbency, the flame retarding effect, and the resistance of the coat under stresses as encountered in practice.

5           A variety of methods have been developed for the efficient measurement of the test panels. For instance, DE-196 40 376.6 describes an automated method of measuring coated test panels. In that method a robot guides various measuring instruments along  
10   predetermined test tracks over the test panel, and electronically records the measurements obtained. The determination of the coat-thickness dependency of various parameters in a single measuring operation is the aim of DE 196 05 520 C1. For this purpose, a wedge-  
15   shaped coating film is applied and both the coat thickness and the optical parameters are measured in each case along a gridlike screen.

          However, the methods referred to have the disadvantage that they do not take sufficient account  
20   of the directional dependency of the measurements. In the case of effect coatings, for example, as widely used in automotive finishing, however, the angular dependency of optical properties plays an important part. For the measurements to be meaningful it is  
25   therefore vital to take into account the angular conditions relative to the coat surface under which said measurements were taken, and to obtain sufficient

measurements to allow recognition of functional correlations.

In the case where the coat thickness varies, moreover, it may be important to know the situation of  
5 the measurement direction relative to the coat-thickness gradient. This mutual dependency of measurement direction and coat-thickness gradient is not taken into account, and certainly not efficiently recorded, in any of the prior art methods.

10 In contrast, the present invention has set itself the object of avoiding the disadvantages of the prior art and of providing a method which can be carried out efficiently, simply, and automatically as well if desired, and which in one measurement pass  
15 makes it possible to detect direction-dependent measurements and also a dependency of the measurements on the coat-thickness gradient.

This object is achieved by means of a method in which measurements of coating properties are made along  
20 a test track on a sample coating using one or more measuring instruments. At least one measurement is to be recorded in relation to direction, i.e., it depends on the relative angle between the measurement direction and a second direction, e.g., the film surface and/or  
25 the coat-thickness gradient. This coat-thickness gradient is a two-dimensional parameter (vector) which



points in the direction of the steepest increase in coat thickness.

Moreover, the course of the sample coating and of the test track is such that there is at least one coat thickness of the sample coating which occurs at least twice and with different coat-thickness gradients along the test track. Once during the measurement along the test track, in other words, a coat thickness  $SD_0$  is traversed where there is a certain coat-thickness gradient  $G_1$  (increase or decrease in coat thickness), and this coat thickness  $SD_0$  is subsequently traversed a second time with a different coat-thickness gradient  $G_2$ .

The method of the invention has the advantage that, in a single measurement pass (measurement along the test track), measurements are made at different angles between measurement direction and coat-thickness gradients  $G$  for at least one coat thickness  $SD_0$ . Any mutual dependency of these directions that leads to measurable differences is immediately recognized. This is important, for example, for many optical properties of effect coatings, in the case of which such deviations are not desired.

Preferably, the corresponding coat-thickness gradients are different in sign, i.e., they point to different sides of space and are of equal magnitude ( $G_1 = -G_2$ ) Therefore, just the directional dependency of

the parameter of interest on the coat-thickness gradient is detected, with other conditions remaining constant.

In the simplest case, the coat thickness along the test track will have a minimum or a maximum, i.e., its course will have the form of a trough or peak. Since there is a constant change in the coat thickness, around the minimum/maximum, a continuous test track will traverse all coat thicknesses twice and with different gradients.

In particular, the coat thickness may change symmetrically along the test track, i.e., plotted as a function of the location, the coat thickness produces a mirror-symmetrical line. Specific symmetrical courses of this kind are, for example, bell-shaped or parabolic.

A sample coating of the aforementioned kind, with symmetry and a thickness maximum, may be produced, for example, by spraying along a straight line. As a result of the normal distribution of the spray mist with decreasing film thickness at the edges of the application, there is in fact automatically formation of a coat-thickness profile which extends in a bell shape transversely to the spray direction. Consequently, sample coatings of this kind can be produced using conventional methods and automatic equipment.

The test track may have a very general course. The expression "test track" refers quite generally to the temporally ordered sequence of the measurement sites. The test track corresponds to the path traveled  
5 by the measuring instruments over the sample coating, although only those sites at which measurements take place are ultimately relevant.

For reasons of simplicity and mechanical operability of the measuring instruments, the test track will  
10 generally extend without reversals, and in the simplest case will be linear.

Using the method of the invention it is possible to measure, inter alia, coat thickness, evenness, shade, haze, and/or gloss of the sample  
15 coating. For all measurements, it is particularly preferred to record the coat thickness as well, in order to determine the dependency of these measurements on the coat thickness. Furthermore, it is possible in that case to monitor the presence of comparable coat  
20 thicknesses and to monitor the coat-thickness gradients in relation to the measurements. If, however, the coat-thickness course of the sample coating is sufficiently constant and reproducible, it may be possible to refrain from such subsequent measurement and to derive  
25 or estimate the coat thickness indirectly from the site of the measurement.

In the text below, the invention is illustrated by way of example with reference to the figures.

Fig. 1 shows a perspective view of the measurement of the invention.

5 Fig. 2 shows the coat thickness as a function of the measurement path.

Fig. 3 shows measured brightness values as a function of the coat thickness.

10 Figure 1 shows, in a perspective view, the principle of the measurement of the invention on a sample coating 1.

The sample coating consists of a substrate 3, e.g., a metal panel, and of a coating film 2 applied thereon. The coat thickness of the coating film 2 shown has a  
15 curving, symmetrical course with a maximum in the center. The substrate 3 will generally be planar, as shown, although in principle it could also have an arbitrarily curved surface. In the case of a planar substrate, however, the conditions are more simple,  
20 since the film surface corresponds directly to the course of the coat thickness and therefore the inclination of this surface and the coat-thickness gradient are parameters which correspond to one another.

25 If the substrate base were to change in a nonplanar manner, then the coat thickness and its gradient would not be represented solely by the film

surface. A limiting case in this context would be a planar film surface over a nonplanar substrate. In that case there would be no surface inclination and hence only the isolated influence of the coat-thickness  
5 gradient.

Also shown are test tracks 4a and 4b, of which one - 4a - extends in the x-direction, the other - 4b - in the y-direction. Drawn in on the tracks are exemplary gradient vectors 5a, 5a' and 5b, 5b', which  
10 should all be situated at the same coat thicknesses  $SD_0$ . The gradients lie parallel to the plane of the substrate 3 and point in the direction of maximum increase in coat thickness. If the measurement is performed along a test track 4a, then measurement takes  
15 place first at the coat thickness  $SD_0$  with a positive gradient 5a and subsequently at the same coat thickness  $SD_0$  with a negative gradient 5a'.

Similar comments apply to the test track 4b, which is traversed in parallel sections.  
20 In addition to the tracks 4a, 4b depicted by way of example, numerous other kinds of test tracks are also possible.

The vectorial gradients  $\underline{G}$  are defined mathematically by way of the derivation of the function  
25  $f(\underline{r})$ , which in a coordinate system with (two-dimensional) site vector  $\underline{r}$  describes the surface of the coating film 2, i.e.:

$$\underline{G} := \text{grad}(f) = \nabla f = df/d\underline{r}$$

The arrow 6 symbolizes the viewing direction of a measuring instrument, e.g., of a colorimeter. While it is possible in principle for the viewing direction to change along the test track, it is an advantage of the method of the invention that it may remain constant (i.e., is shifted only in parallel). This considerably simplifies the guidance of the measuring instruments.

10 With this setup, the directional variations required for the measurement are obtained by means of the specific course of the coat thickness and of the test track, in accordance with the invention.

Figure 2 shows, diagrammatically, the plot of the coat thickness  $SD(x)$  of the coating film 2 from Figure 1 over the path section  $x$  traveled on the test track 4a. The curved course can be seen, with the gradients  $\underline{G}_1$  and  $\underline{G}_2$  at the coat thickness  $SD_0$ . Owing to the linear course of the test track 4a transverse to the curve of the coating, the gradients in this case correspond to the derivation  $dSD/dx$ .

15  
20

Figure 3, finally, shows a real measurement of the brightness  $L^*$  (CIELAB system) in accordance with the principle illustrated in Figure 1 (track 4a). In the diagram, the brightness is plotted as a function of the coat thickness  $SD$ . The corresponding coat thicknesses may be measured either at the same time as

25

the brightness or else calculated from a known correlation between coat thickness SD and path section x traveled on the test track (cf. Figure 2).

The measurements plotted are shown with  
5 different symbols for the rising and the falling sections of the test track. Finally, for each coat thickness  $SD_0$  between about 10 and 25  $\mu m$ , there are two measurements which can be seen in relation to two different gradients. From the plot it emerges that  
10 these measurements diverge in the manner of a hysteresis, i.e., the coating looks different from two viewing directions rotated by  $180^\circ$  (and under otherwise identical conditions). A difference of this kind, however, is not tolerable, something which can be  
15 discovered for the coating material in question directly on the basis of a measurement in accordance with the invention.

**What is claimed is:**

1. A method of determining direction-dependent  
5 properties of coatings,  
in which measurements of coating properties are made  
along a test track on a sample coating using one or  
more measuring instruments,  
wherein
  - 10 a) at least one measurement is recorded in relation  
to direction, and
  - b) the sample coating has at least one coat thickness  
which occurs twice and with different coat-  
thickness gradients along the test track.
- 15 2. The method as claimed in claim 1, wherein the  
corresponding coat-thickness gradients are different in  
sign.
3. The method as claimed in one of claims 1 and 2,  
wherein the coat thickness has a minimum or a maximum  
20 along the test track.
4. The method as claimed in one of claims 1 to 3,  
wherein the coat thickness changes symmetrically along  
the test track, preferably being bell-shaped or  
parabolic.
- 25 5. The method as claimed in one of claims 1 to 4,  
wherein the sample coating is produced by spraying  
along a straight line.



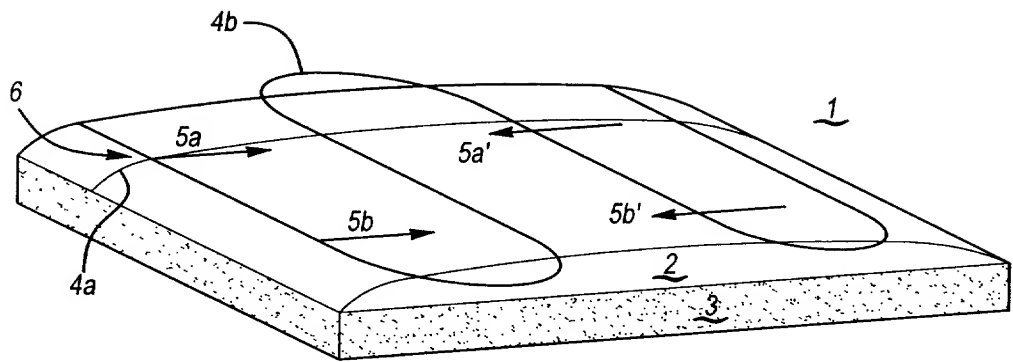
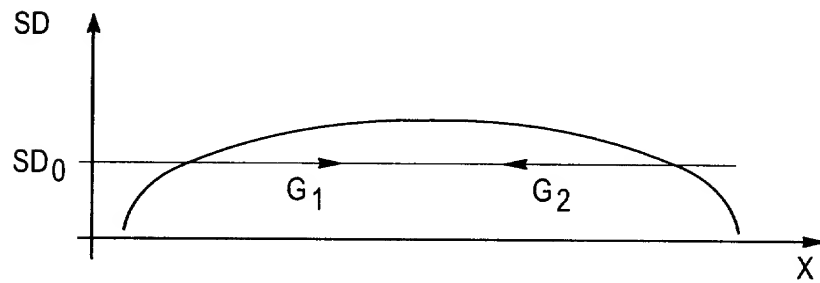
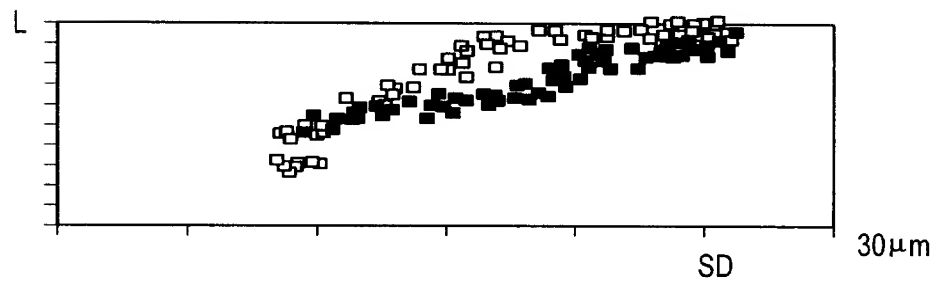
6. The method as claimed in one of claims 1 to 5, wherein the test track extends without reversals, preferably linearly.

7. The method as claimed in one of claims 1 to 6,  
5 which is used to measure coat thickness, evenness, shade, haze, and/or gloss of the sample coating.

# **Abstract**

A method of determining direction-dependent properties of coatings, in which measurements of coating properties are made along a test track (4a, 4b) on a sample coating using one or more measuring instruments and at least one measurement is recorded in relation to direction (6). The course of the sample coating is such that there are points of identical coat thickness (2) with different coat-thickness gradients (5) along the test track.

Fig. 1

Fig-1Fig-2Fig-3



<b>Combined Declaration For Patent Application and Power of Attorney</b>			Practitioner's Docket No. <b>IN-5443</b>								
<p>As below named inventor, I hereby declare that: My residence, post office address and citizenship are as stated below next to my name.</p> <p>I believe I am the original, first and sole inventor (if only name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: <b>METHOD FOR DETERMINING DIRECTION-DEPENDENT PROPERTIES OF ENAMELS</b></p> <p>The specification of which (check only one item below):</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;"><input type="checkbox"/></td> <td style="padding: 5px;">is attached hereto</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="padding: 5px;">Was filed as United States Application Serial No. <u>0 /</u> on and _____. Was amended on _____ (if applicable).</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td style="padding: 5px;">was filed as PCT international application Number <u>PCT/EP99/04497</u> on <u>30.06.99</u> and was amended under PCT Article 19 on _____ (if applicable).</td> </tr> </table>						<input type="checkbox"/>	is attached hereto	<input type="checkbox"/>	Was filed as United States Application Serial No. <u>0 /</u> on and _____. Was amended on _____ (if applicable).	<input checked="" type="checkbox"/>	was filed as PCT international application Number <u>PCT/EP99/04497</u> on <u>30.06.99</u> and was amended under PCT Article 19 on _____ (if applicable).
<input type="checkbox"/>	is attached hereto										
<input type="checkbox"/>	Was filed as United States Application Serial No. <u>0 /</u> on and _____. Was amended on _____ (if applicable).										
<input checked="" type="checkbox"/>	was filed as PCT international application Number <u>PCT/EP99/04497</u> on <u>30.06.99</u> and was amended under PCT Article 19 on _____ (if applicable).										
<p>I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.</p> <p>I acknowledge the duty to disclose information which is material to the examination of this application is accordance with Title 37, Code of Federal Regulations, § 1.56(a).</p> <p>I hereby claim foreign priority benefits under Title 35, United States Code § 119 of any foreign application(s) for patent or inventor's certificate of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating a least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:</p>											
<b>PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. 119:</b>											
COUNTRY	A PPLICATION NUMBER	DATE OF FILING DATE/MONTH/YEAR	PRIORITY CLAIMED UNDER 35 UNDER 35 USCX § 119								
German	198 30 745.4	09.07.98	YES	NO							
			YES	NO							
			YES	NO							
			YES	NO							
<p>I hereby claim the benefit under Title 35, United States Code, Sec. § 120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, Sec. § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Sec. § 1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:</p>											
<b>PRIOR US APPLICATIONS OR PCT INTERNATIONAL APPLICATION DESIGNATING THE U.S. FOR BENEFIT UNDER 35 USC § 120:</b>											
<b>U.S. APPLICATIONS</b>			<b>STATUS (Check one)</b>								
U.S. APPLICATION NUMBER	U.S. FILING DATE	PATENTED	PENDING	ABANDONED							
<b>PCT APPLICATION DESIGNATING THE U.S.</b>											
PCT APPLICATION NO.	PCT FILING DATE	U.S. SERIAL NUMBERS ASSIGNED (if any)									

<b>Combined Declaration For Patent Application and Power of Attorney (Continued)</b>		Practitioner's Docket No. <b>IN-5443</b>	
<b>POWER OF ATTORNEY:</b> As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (List name and registration number).			
<b>Anne Gerry Sabourin</b>	Registration No. <u>33,772</u>	<b>Anna M. Budde</b>	Registration No. <u>35,085</u>
<b>Mary E. Golota</b>	Registration No. <u>36,814</u>	<b>Michael P. Brennan</b>	Registration No. <u>30,642</u>
<b>Fernando A. Borrego</b>	Registration No. <u>34,780</u>	<b>Brian Stegman</b>	Registration No. <u>30,977</u>
<b>Karen M. Dellerman</b>	Registration No. <u>33,592</u>	<b>Ryan W. Massey</b>	Registration No. <u>38,543</u>
<b>Send Correspondence to:</b> BASF CORPORATION PATENT DEPARTMENT 26701 TELEGRAPH ROAD SOUTHFIELD, MI 48034-2442		<b>Direct Telephone Calls to:</b> (name and telephone number) Anne Gerry Sabourin (248) 948-2021 Fax (248) 948-2093	
		<b>Direct Telephone Calls to:</b> (name and telephone number) or Mary E. Golota (248) 948-2020 Fax (248) 948-2093	

### DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

### SIGNATURE(S)

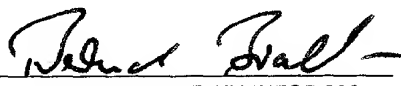
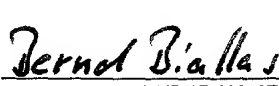
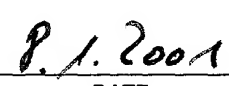
<b>FULL NAME OF INVENTOR</b>	<b>FAMILY NAME</b> <u>DUSCHEK</u>	<b>FIRST GIVEN NAME</b> <u>Wolfgang</u>	<b>SECOND GIVEN NAME</b>
<b>RESIDENCE &amp; CITIZENSHIP</b>	<b>CITY</b> <u>D-48165 Münster</u>	<b>STATE OR FOREIGN COUNTRY</b> <u>Germany</u>	<b>COUNTRY OF CITIZENSHIP</b> <u>German</u>
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 SIGNATURE OF INVENTOR 201		Wolfgang DUSCHEK TYPED NAME	 <u>11.01.2001</u> DATE

<b>Combined Declaration For Patent Application and Power of Attorney (Continued)</b>		Practitioner's Docket No. <b>IN-5443</b>	
POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (List name and registration number).			
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Fernando A. Borrego	Registration No. 34,780	Brian Stegman	Registration No. 30,977
Karen M. Dellerman	Registration No. 33,592	Ryan W. Massey	Registration No. 38,543
	Registration No.		Registration No.
<b>Send Correspondence to:</b>		<b>Direct Telephone Calls to:</b>	
BASF CORPORATION PATENT DEPARTMENT 26701 TELEGRAPH ROAD SOUTHFIELD, MI 48034-2442		(name and telephone number) Anne Gerry Sabourin (248) 948-2021 Fax (248) 948-2093	
		or (name and telephone number) Mary E. Golota (248) 948-2020 Fax (248) 948-2093	

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

### SIGNATURE(S)

FULL NAME OF INVENTOR	FAMILY NAME <u>BIALLAS</u>	FIRST GIVEN NAME <u>Bernd</u>	SECOND GIVEN NAME
RESIDENCE & CITIZENSHIP	CITY <u>D-48324 Albesloh,</u>	STATE OR FOREIGN COUNTRY <u>Germany</u>	COUNTRY OF CITIZENSHIP <u>German</u>
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<div style="text-align: center;">Bernd BIALLAS</div> <div>    </div> <div> SIGNATURE OF INVENTOR 202 TYPED NAME DATE </div>			